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ABSTRACT

The technology data collection provides fundamental information on Iowa public schools with respect to various aspects of technology. Responses to the survey were received from 100% of the 379 Iowa public school districts during the 1996-97 school year. The survey was conducted to provide baseline information on a central core of technology elements to allow for the development of trend data. These data will enable the Department to describe the status of Iowa public school technology, to reflect needs, and to facilitate the school improvement processes. In addition, the survey will provide data to respond to legislative and other requests about technology in Iowa public school districts and will allow for comparisons of similar data with other states and the nation. The report arranges information by technology area: computer hardware/technology, Internet uses and software, instructional integrated technology, automated student record systems, and technology support and staff development. The report also presents and compares information collected from a 1995-96 school year technology survey. Appendices contain the technology survey form and selected survey data. Data elements include the number of in-school computers, the percent of computers purchased in the last two years, the number of pupils per computer, Internet access status, remote access to classes status, and automated student record status. (SWC)

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IOWA DEPARTMENT OF EDUCATION

TECHNOLOGY REPORT

OCTOBER, 1997

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TECHNOLOGY REPORT

A Report on

Technology

in Iowa Public School Districts

Iowa Department of Education
October, 1997

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Introduction

The purpose of the technology data collection is to provide fundamental information on Iowa public schools with respect to various aspects of technology. Responses to the survey were received from 100 percent of the 379 Iowa public school districts during the 1996-97 school year. The survey was conducted to provide current baseline information on a central core of technology elements to allow for the development of trend data. These data will enable the Department to describe the status of Iowa public school technology, to reflect needs, and to facilitate the school improvement processes. In addition, the survey will provide data to respond to legislative and other requests about technology in Iowa public school districts and will allow for comparisons of similar data with other states and the nation.

The survey, as well as this report, includes the arrangement of information according to the following areas: computer hardware/technology, Internet uses and software, instructional integrated technology, automated student record systems, and technology support and staff development. Two appendices are also included with this report. Appendix A includes the technology survey form. Appendix B includes selected survey data reported by Iowa school districts during the 1996-97 school year. Data elements include the number of in-school computers, the percent of computers purchased in the last two years, the number of pupils per computer, Internet access status, remote access to classes status, and automated student record status.

This report also presents and compares information collected from a 1995-96 school year technology survey cosponsored by the Iowa Department of Education and Iowa State University. The 1995-96 survey results presented are based on completed surveys from 331 of 384 school districts, a return rate of 86.2 percent.

Inquiries regarding the survey and requests for data may be addressed to the Bureau of Planning, Research, and Evaluation (515) 281-4730 or email (sboal@max.state.ia.us).

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Computer Hardware and Technology

The computer hardware and technology section presents information on the availability of computers and other technology, location of in-school computers, the types of computers in use, availability of CD ROM's, modems, and laserdiscs, satellite dishes, cable television, and local area and wide area networks.

Distribution of Computers

Tables 1 and 2 depict the total number of computers reported by public school districts, the certified enrollment, and the number of pupils per computer. In 1995-96 the total number of pupils per computer, statewide was 7.2 compared to 5.9 in 1996-97. For all seven enrollment categories, substantial decreases in the number of pupils per computer were noted. In 1996-97 as in 1995-96 the ratio of pupils per computer was lowest in the smallest enrollment categories and increased with each successively larger enrollment category.

Table 1

COMPUTER DISTRIBUTION IN IOWA PUBLIC SCHOOL DISTRICTS 1995-96

	Enrollment Category							
	<250	250-399	400-599	600-999	1,000-2,499	2,500-7,499	7,500+	State
Number of Districts Reporting	22	43	74	91	72	22	7	331
Number of Computers	829	2,778	6,043	11,258	13,989	10,010	9,371	54,278
Certified Enrollment[1]	4,509	13,102	36,043	68,185	104,286	82,049	82,983	391,157
Pupils per Computer[2]	5.4	4.7	6.0	6.1	7.6	8.2	8.9	7.2

SOURCE: IOWA DEPARTMENT OF EDUCATION, USING COMPUTERS AND THE WORLD WIDE WEB, 1996 (SURVEY OF PUBLIC SCHOOL DISTRICTS JOINTLY SPONSORED BY IOWA STATE UNIVERSITY).
[1] SUM OF CERTIFIED ENROLLMENT FOR DISTRICTS REPORTING.
[2] CERTIFIED ENROLLMENT DIVIDED BY THE NUMBER OF COMPUTERS.

Table 2

COMPUTER DISTRIBUTION IN IOWA PUBLIC SCHOOL DISTRICTS 1996-97

	Enrollment Category							
	<250	250-399	400-599	600-999	1,000-2,499	2,500-7,499	7,500+	State
Number of Districts Reporting	24	46	76	116	83	25	9	379
Number of Computers	1,155	3,813	7,904	18,206	21,910	16,197	17,054	86,239
Certified Enrollment[1]	4,818	15,324	37,699	88,577	126,738	99,427	133,004	505,587
Pupils per Computer[2]	4.2	4.0	4.8	4.9	5.8	6.1	7.8	5.9

SOURCE: IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH AND EVALUATION, TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE.
[1] SUM OF CERTIFIED ENROLLMENT FOR DISTRICTS REPORTING.
[2] CERTIFIED ENROLLMENT DIVIDED BY THE NUMBER OF COMPUTERS.

Table 3 provides a comparison of the percent of certified enrollment and the percent of the total number of computers reported in public schools. In 1996-97, districts under 2,500 enrollment reported a higher percentage of computers than the percentage of enrollment represented by enrollment categories. Districts with enrollments of 7,500 and above represented 26.3 percent of the certified enrollment and accounted for less than 20 percent of all computers in use by Iowa public schools.

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Table 3

DISTRIBUTION OF COMPUTERS VERSUS CERTIFIED ENROLLMENT DISTRIBUTION IN IOWA PUBLIC SCHOOL DISTRICTS — 1996-97

	Enrollment Category							
	<250	250-399	400-599	600-999	1,000-2,499	2,500-7,499	7,500+	State
Number of Districts Reporting	24	46	76	116	83	25	9	379
Percent of Certified Enrollment	1.0	3.0	7.4	17.5	25.1	19.7	26.3	100.0
Percent of Computers	1.3	4.4	9.2	21.1	25.4	18.8	19.8	100.0

SOURCE: IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH, AND EVALUATION, TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE.

Location of In-School Computers

The location of in-school computers in Iowa public school districts is reported in Table 4. Overall, an average of just over 48 percent of computers used by students were located in computer labs. Districts with enrollments under 1,000 reported using a higher percentage of their computers in a lab environment compared to districts with enrollments of 1,000 or more students. An overall average of nearly 43 percent of in-school computers was found in classrooms, with a range of about 38 to 49 percent across enrollment categories. The average percentage of computers located in classrooms, for districts with enrollments greater than 1,000 was from about seven to 11 percentage points higher than in districts with enrollments under 1,000. Statewide, an average of nine percent of in-school computers were located in media centers, with a range of 7.6 percent to 12.4 percent across enrollment categories. The percentage of computers found in media centers generally increased with successive increases in enrollment.

Table 4

AVERAGE PERCENT OF IN-SCHOOL COMPUTERS IN IOWA PUBLIC SCHOOLS BY LOCATION[1,2] — 1996-97

Enrollment Category	Number of Districts	Responding Districts	Location		
			Computer Labs	Classrooms	Media Center
<250	24	19	54.1%	38.3%	7.6%
250-399	46	40	47.9	43.8	8.3
400-599	76	66	51.8	40.1	8.1
600-999	116	102	49.8	41.2	9.0
1,000-2,499	83	72	45.1	45.4	9.5
2,500-7,499	25	23	38.6	49.3	12.2
7,500+	9	7	40.0	47.6	12.4
State	379	329	48.2	42.8	9.0

SOURCE: IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH, AND EVALUATION, TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE.

NOTES: [1]INCLUDES ONLY THOSE DISTRICTS WHERE THE SUM OF PERCENTAGES ALLOCATED TO ALL LOCATIONS WAS EQUAL TO 100 PERCENT.
[2]REPRESENTS THE AVERAGE PERCENT OF COMPUTERS BY LOCATION.

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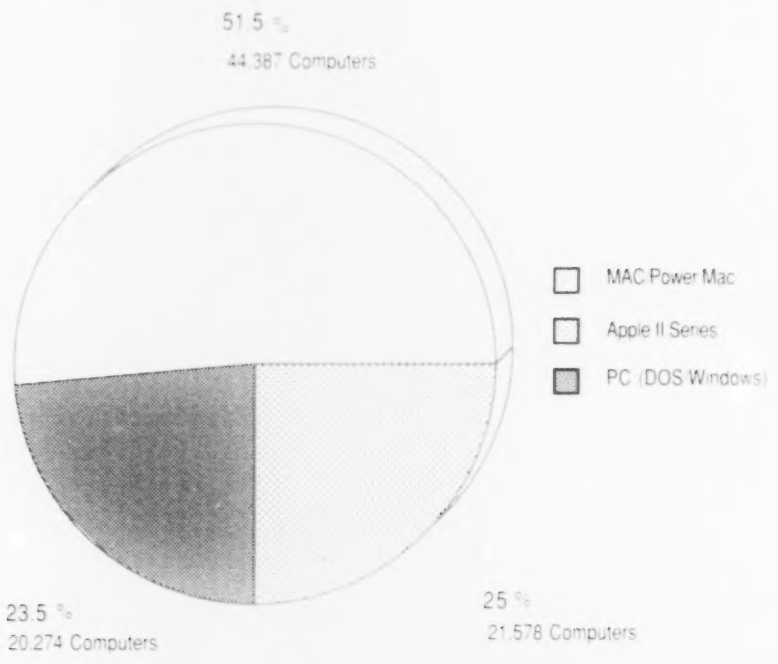
Type of Computers in Use

Figures 1-3 present information on the numbers and types of computers in use in Iowa public schools. Overall, Macintosh and Power Macintosh accounted for 51.5 percent or 44,387 of the 86,239 computers reported. Apple II Series computers accounted for 25 percent of the total computers, followed by the PC representing 23.5 percent of all computers.

Figure 1

NUMBER AND PERCENT OF COMPUTERS USED IN IOWA PUBLIC SCHOOL DISTRICTS BY TYPE OF COMPUTER 1996-97

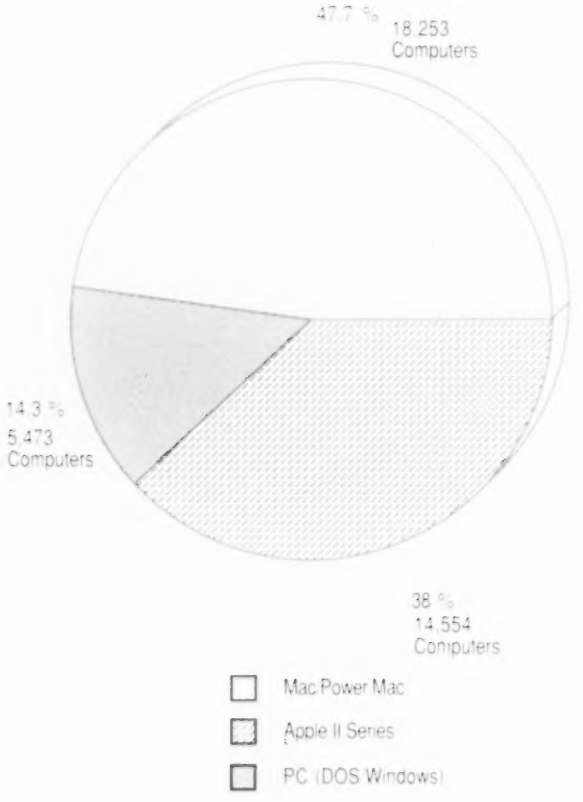


SOURCE: IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH AND EVALUATION, TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE.

Figures 1 and 2 compare computer usage by type of computer at the elementary (K-6) and secondary (7-12) grade levels. At both elementary and secondary levels the predominate type of computer used was Macintosh/ Power Macintosh at 47.7 percent and 54.5 percent respectively. The second most predominant type of computer used at the elementary level was the Apple II Series representing 38 percent of all computers. The PC was the second most often used type of computer at the secondary level representing nearly 31 percent of all computers, while PC's represented only 14.3 percent of all computers used at the elementary level.

Figure 2

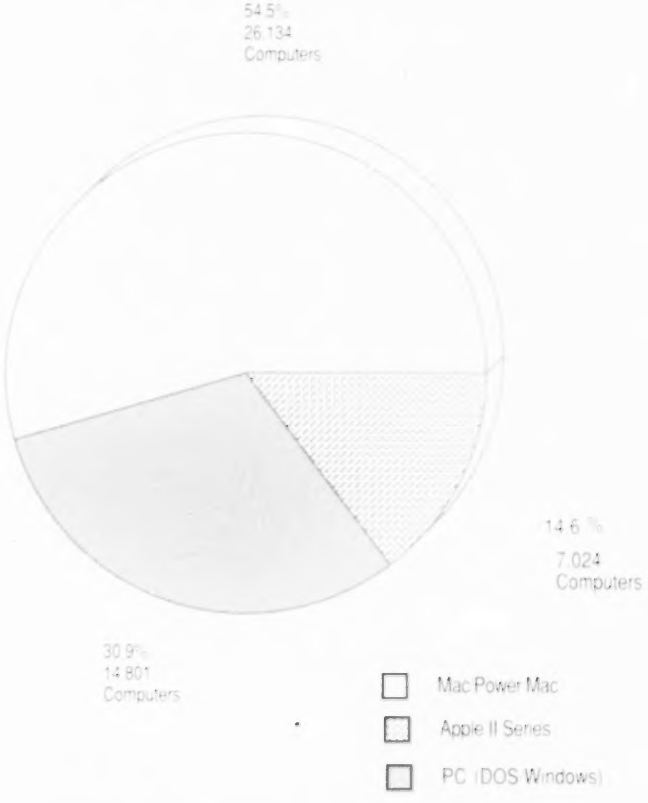
NUMBER AND PERCENT OF COMPUTERS USED IN IOWA PUBLIC SCHOOL DISTRICTS BY TYPE OF COMPUTER ELEMENTARY LEVEL 1996-97



SOURCE: IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH AND EVALUATION, TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE

Figure 3

NUMBER AND PERCENT OF COMPUTERS USED IN IOWA PUBLIC SCHOOL DISTRICTS BY TYPE OF COMPUTER SECONDARY LEVEL 1996-97



SOURCE: IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH AND EVALUATION, TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE

CD ROMs, Modems, and Laserdiscs

The number of Iowa school districts reporting the use of CD ROMs, modems, and laserdisc players in 1995-96 and in 1996-97 is shown in Tables 5 and 6. Statewide, the highest use was reported for CD ROMs at 99.7 percent in 1996-97, compared to 94.3 percent of the districts in 1995-96. Modem usage was up from 277 districts in 1995-96 to 317 districts in 1996-97. Laserdisc usage was up from 248 districts in 1995-96 to 288 districts in 1996-97, reflecting a small percentage increase in use over the previous school year.

Table 5

NUMBER OF IOWA PUBLIC SCHOOL DISTRICTS USING CD-ROMS, MODEMS, AND LASERDISC PLAYERS — 1995-96

	Enrollment Category							
	<250	250-399	400-599	600-999	1,000-2,499	2,500-7,499	7,500+	State
Number of Districts Reporting TECHNOLOGY	22	43	74	91	72	22	7	331
CD-ROM								
Number	19	40	73	85	69	19	7	312
Percent	86.4	93.0	98.6	93.4	95.8	86.4	100.0	94.3
MODEMS								
Number	16	36	53	83	62	20	7	277
Percent	84.2	90.0	72.6	91.2	86.1	90.9	100.0	83.7
LASERDISC PLAYER								
Number	16	27	47	67	65	20	6	248
Percent	72.7	62.8	63.5	73.6	90.3	90.9	85.7	74.9

SOURCE: IOWA DEPARTMENT OF EDUCATION, USING COMPUTERS AND THE WORLD WIDE WEB, 1996 (SURVEY OF PUBLIC SCHOOL DISTRICTS JOINTLY SPONSORED BY IOWA STATE UNIVERSITY).

Table 6

NUMBER OF IOWA PUBLIC SCHOOL DISTRICTS USING CD-ROMS, MODEMS, AND LASERDISC PLAYERS — 1996-97

	Enrollment Category							
	<250	250-399	400-599	600-999	1,000-2,499	2,500-7,499	7,500+	State
Number of Districts Reporting TECHNOLOGY	24	46	76	116	83	25	9	379
CD-ROM								
Number	24	46	76	116	83	24	9	378
Percent	100.0	100.0	100.0	100.0	100.0	96.0	100.0	99.7
MODEMS								
Number	23	35	60	95	74	21	9	317
Percent	95.8	76.1	78.9	81.9	89.2	84.0	100.0	83.4
LASERDISC PLAYER								
Number	14	30	51	92	70	22	9	288
Percent	58.3	65.2	67.1	79.3	84.3	88.0	100.0	76.0

SOURCE: IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH, AND EVALUATION, TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE.

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Satellite Dishes

Statewide, 379 public school districts, 35.1 percent, reported having satellite dishes in 1996-97. A substantially higher percentage of districts with enrollments of 1,000 and above reported using satellite dishes than districts with enrollments below 1,000. Figures reported in 1996-97 were quite similar to 1995-96 figures (Table 7).

Table 7

NUMBER AND PERCENT OF IOWA PUBLIC SCHOOL DISTRICTS USING SATELLITE DISHES — 1995-96 AND 1996-97

Enrollment Category	1995-96		1996-97	
	Number of Districts Reporting	Percent of Districts with Satellites	Number of Districts Reporting	Percent of Districts with Satellites
<250	22	13.6%	24	12.5%
250-399	43	20.9	46	19.6
400-599	74	17.6	76	23.7
600-999	91	41.8	116	37.9
1,000 - 2,499	72	48.6	83	47.0
2,500-7,499	22	59.1	25	56.0
7,500+	7	57.1	9	66.7
State	331	34.7	379	35.1

SOURCE: IOWA DEPARTMENT OF EDUCATION, USING COMPUTERS AND THE WORLD WIDE WEB, 1996 (SURVEY OF PUBLIC SCHOOL DISTRICTS JOINTLY SPONSORED BY IOWA STATE UNIVERSITY) AND IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH, AND EVALUATION, TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE.

Cable Television

A total of 316 of Iowa's public school districts reported having cable television in 1996-97. This represented 83.4 percent of all districts, a slightly higher percentage of districts than reported in 1995-96 (Table 8). Districts with enrollments of 1,000 or more reported a substantially higher percentage of cable television availability than other enrollment categories, in both years.

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Table 8

NUMBER AND PERCENT OF IOWA PUBLIC SCHOOL DISTRICTS USING CABLE TELEVISION IN 1995-96 AND 1996-97

Enrollment Category	Number of Districts Reporting		Number of Districts with Cable TV		Percent of Districts with Cable TV	
	95-96	96-97	95-96	96-97	95-96	96-97
<250	22	24	18	18	81.8	75.0
250-399	43	46	37	37	86.0	80.4
400-599	74	76	51	56	68.9	73.7
600-999	91	116	75	91	82.4	78.4
1,000 - 2,499	72	83	65	80	90.3	96.4
2,500-7,499	22	25	20	25	90.9	100.0
7,500+	7	9	7	9	100.0	100.0
State	331	379	273	316	82.5	83.4

SOURCE: IOWA DEPARTMENT OF EDUCATION, USING COMPUTERS AND THE WORLD WIDE WEB, 1996 (SURVEY OF PUBLIC SCHOOL DISTRICTS JOINTLY SPONSORED BY IOWA STATE UNIVERSITY AND IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH, AND EVALUATION, TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE.

Local Area Networks (LANS) and Wide Area Networks (WANS)

The number of districts reporting the use of local area networks (LANS) increased from 226 or 68.3 percent in 1995-96 to 312 or 82.3 percent in 1996-97. In 1995-96, 18.7 percent of districts reporting indicated having wide area networks (WANS), compared to a reported 40.1 percent in 1996-97. In 1996-97 the percentage of districts reporting LANS ranged from 50 percent in the smallest districts to 100 percent in the largest districts (Tables 9 and 10).

Table 9

LOCAL AREA AND WIDE AREA NETWORK DISTRIBUTION IN IOWA PUBLIC SCHOOL DISTRICTS — 1995-96

	Enrollment Category							
	<250	250-399	400-599	600-999	1,000-2,499	2,500-7,499	7,500+	State
Number of Districts Reporting	22	43	74	91	72	22	7	331
LOCAL AREA NETWORK								
Number	8	24	46	60	61	21	6	226
Percent	36.4	55.8	62.2	65.9	84.7	95.5	85.7	68.3
WIDE AREA NETWORK								
Number	0	7	6	17	18	9	5	62
Percent	0	16.3	8.1	18.7	25.0	40.9	71.4	18.7

SOURCE: IOWA DEPARTMENT OF EDUCATION, USING COMPUTERS AND THE WORLD WIDE WEB, 1996 (SURVEY OF PUBLIC SCHOOL DISTRICTS JOINTLY SPONSORED BY IOWA STATE UNIVERSITY).

WANS were less prevalent than LANS and the percentage of districts reporting WANS in 1996-97 ranged from 8.3 percent in districts with enrollments under 250 to 100 percent in the largest enrollment category (Table 10).

Table 10

LOCAL AREA AND WIDE AREA NETWORK DISTRIBUTION IN IOWA PUBLIC SCHOOL DISTRICTS 1996-97

	Enrollment Category							
	<250	250-399	400-599	600-999	1,000-2,499	2,500-7,499	7,500+	State
Number of Districts Reporting	24	46	76	116	83	25	9	379
LOCAL AREA NETWORK								
Number	12	34	57	96	79	25	9	312
Percent	50.0	73.9	75.0	82.6	95.2	100.0	100.0	82.3
WIDE AREA NETWORK								
Number	2	12	21	47	46	15	9	152
Percent	8.3	26.1	27.6	40.5	55.4	60.0	100.0	40.1

SOURCE: IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH, AND EVALUATION, TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE.

Internet Uses and Software

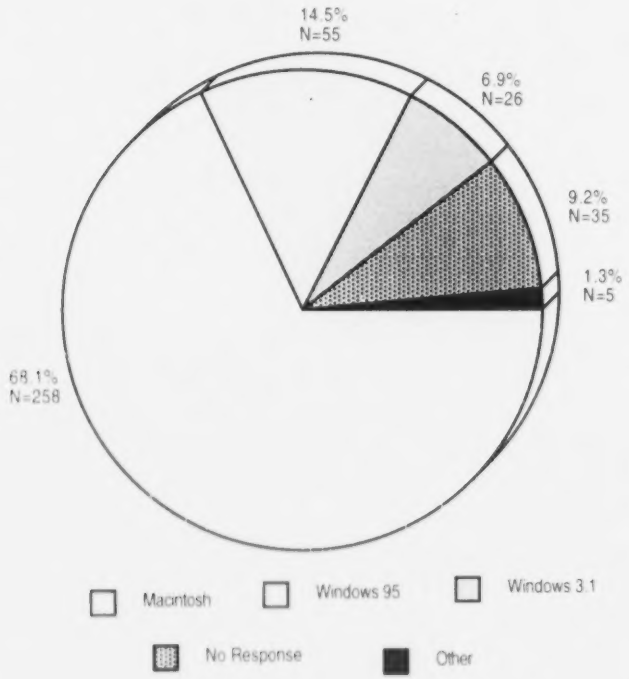
The Internet uses and software component reviews findings on operating systems to support Internet access, school district Internet access status, Internet applications available to students, web browser use, home page development, and Internet connectivity used by Iowa school districts.

Operating Systems to Support Student Internet Access

The number of districts reporting the type of predominant operating system used to support student Internet access was 344, or 90.8 percent of Iowa public school districts in 1996-97. Figure 4 indicates that Macintosh operating systems accounted for over two-thirds of the operating systems in Iowa school districts. More than one in five districts used Windows 3.1 or Windows 95 as their predominate operating system. DOS was not considered to be the predominate operating system by any of the districts responding.

Figure 4

PREDOMINANT OPERATING SYSTEMS SUPPORTING INTERNET ACCESS IN IOWA PUBLIC SCHOOL DISTRICTS 1996-97



SOURCE: IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH, AND EVALUATION, TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE

Access to the Internet

Table 11 reflects the number and percent of Iowa public school districts whose students have regular in-school access to the Internet. Data are provided for 1995-96 and 1996-97. It should be noted here that in 1995-96 the questions posed regarding Internet access did not contain the qualifiers "regular in-school access by students," but instead referred only to having access.

In 1995-96, 72.2 percent of districts surveyed, reported they had Internet access compared to 91.6 percent of all school districts indicating that students had regular in-school access to the Internet in 1996-97. In 1995-96, districts with enrollments under 600 had substantially less access to the Internet than other districts. Only 50 percent of the smallest districts reported having access to the Internet. The percentage of districts with Internet access increased substantially for all enrollment categories from 1995-96 to 1996-97.

Table 11

NUMBER AND PERCENT OF IOWA PUBLIC SCHOOL DISTRICTS WITH ACCESS TO THE INTERNET
1995-96 AND 1996-97

Enrollment Category	Number of Districts Responding		Number of Districts with Internet Access		Percent of Districts with Internet Access	
	95-96	96-97	95-96	96-97	95-96	96-97
<250	22	24	11	20	50.0%	83.3%
250-399	43	46	29	42	67.4	91.3
400-599	74	76	47	64	63.5	84.2
600-999	91	116	71	107	78.0	92.2
1,000 - 2,499	72	83	54	81	75.0	97.6
2,500-7,499	22	25	21	24	95.5	96.0
7,500+	7	9	6	9	85.7	100.0
State	331	379	239	347	72.2	91.6

SOURCE: IOWA DEPARTMENT OF EDUCATION, *Using Computers and the Internet*, 1996 Survey of Public School Districts, jointly sponsored by Iowa State University and Iowa Department of Education, Bureau of Planning, Research, and Evaluation; *Technology Survey*, 1996-97 Technology File.

Internet Applications

Table 12 depicts the number and percent of Iowa public school districts with student Internet applications by the following: computer lab, classroom, library/media center, and grade level. The applications included in Table 12 include email, file transfer protocol (FTP), Gopher, listserve, news groups, and the world wide web (WWW).

Districts reported student access to each of the applications in all settings and at elementary and secondary grade levels. More districts tended to allow access to each of the Internet applications at the secondary grade level than at the elementary grade level.

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For both elementary and secondary grade levels, more districts provided student access to each Internet application through the library/media center than in other settings. The application to which more districts provided access was WWW usage. At the secondary level 74.4 percent provided access through the library/media center, and 51.5 percent of the districts provided access to the WWW through the library/media center at the elementary level. Email was the second most accessible application, followed by FTP and Gopher. The least accessible applications were Listserve and News Groups.

Table 12

NUMBER AND PERCENT OF IOWA PUBLIC SCHOOL DISTRICTS BY INTERNET SOFTWARE APPLICATION, SETTING, AND GRADE LEVEL 1996-97

Internet Application	Type of Setting: Computer Lab N	Computer Lab %	Classroom N	Classroom %	Library/Media Center N	Library/Media Center %
Email						
Elementary (K-6)	59	15.6%	73	19.3%	107	28.2%
Secondary (7-12)	152	40.1	121	31.9	177	46.7
FTP						
Elementary	42	11.1	57	15.0	80	21.1
Secondary	130	34.3	102	26.9	159	42.0
Gopher						
Elementary	41	10.8	53	14.0	82	21.6
Secondary	115	30.3	91	24.0	138	36.4
Listserve						
Elementary	26	6.9	36	9.5	55	14.5
Secondary	88	23.2	69	18.2	103	27.2
News Groups						
Elementary	26	6.9	36	9.5	58	15.3
Secondary	83	21.9	68	17.9	100	26.4
World Wide Web						
Elementary	108	28.5	129	34.0	195	51.5
Secondary	233	61.5	184	48.5	282	74.4

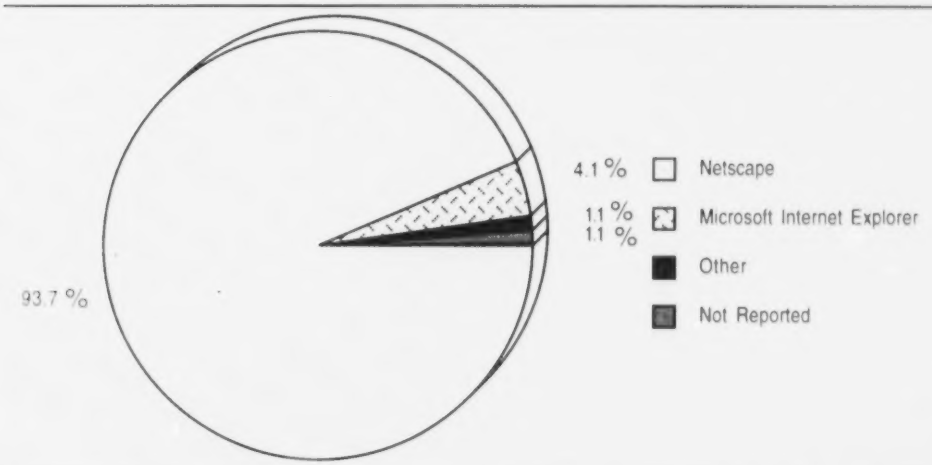
SOURCE: IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH AND EVALUATION, TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE.

Web Browsers

The predominant web browsers in use by Iowa school districts are presented in Figure 5, while all web browsers in use are listed in Table 13. Of the 338 districts indicating student access to the WWW, 317 or 93.7 percent listed Netscape as their predominant web browser, followed by Microsoft Internet Explorer with 4.1 percent, and all other browsers with 1.1 percent. A total of 1.1 percent of the districts responding did not report a predominant web browser in use.

Figure 5

PERCENT OF IOWA PUBLIC SCHOOL DISTRICTS BY PREDOMINANT WEB BROWSER IN USE - 1996-97



SOURCE: IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH, AND EVALUATION, TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE.
NOTES: ALTHOUGH MAC WEB AND MOSAIC WERE WEB BROWSERS IN USE BY SOME PUBLIC SCHOOL DISTRICTS, NONE OF THE SCHOOLS INDICATED THESE TO BE THE PREDOMINANT BROWSER IN USE.

As depicted in Table 13, the web browsers in use by public school students also included Mosaic and Mac Web. These two browsers accounted for 10.1 percent of the districts reporting multiple browser use.

Table 13

NUMBER AND PERCENT OF IOWA PUBLIC SCHOOL DISTRICTS BY WEB BROWSER IN USE - 1996-97

Web Browsers	Number of Districts	Percent
Netscape	325	96.2%
Microsoft Internet Explorer	84	24.9
Mosaic	22	6.5
Mac Web	12	3.6
Other	11	3.3
No Response	0	0.0

SOURCE: IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH, AND EVALUATION, TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE.

Home Pages

Iowa public school districts were asked about their web presence. Table 14 indicates that there were 181 districts, or nearly 48 percent that reported having a home page on the WWW. Seventy-two percent of the 25 school districts with enrollments of 2,500-7,499 had web pages, compared to only 20.8 percent of the districts in the smallest enrollment category. Nearly 62 percent of the public school districts utilized a combination of students and staff for home page development. About 18 percent of the home pages were developed by staff only, while nearly 13 percent were developed by students only. A small percentage of the districts, 7.7 percent, used third-party developers in establishing home pages.

Table 14

NUMBER OF IOWA PUBLIC SCHOOL DISTRICTS WITH HOME PAGES BY WEB SITE DEVELOPER 1996-97

	Enrollment Category								
	<250	250-399	400-599	600-999	1,000-2,499	2,500-7,499	7,500+	Total	
Web Site Developer									Percent
Staff Only	2	0	6	11	9	3	1	32	17.7%
Students Only	0	3	5	7	5	3	0	23	12.7
Combination of Staff and Students	2	14	19	34	27	12	4	112	61.9
Third Party Developers	1	1	0	7	5	0	0	14	7.7
Total Districts with Home Pages	5	18	30	59	46	18	5	181	100.0
Percent with Home Pages	**20.8**	**39.1**	**39.5**	**50.9**	**55.4**	**72.0**	**55.6**	**47.8**	**NA**
Total Districts	24	46	76	116	83	25	9	379	NA

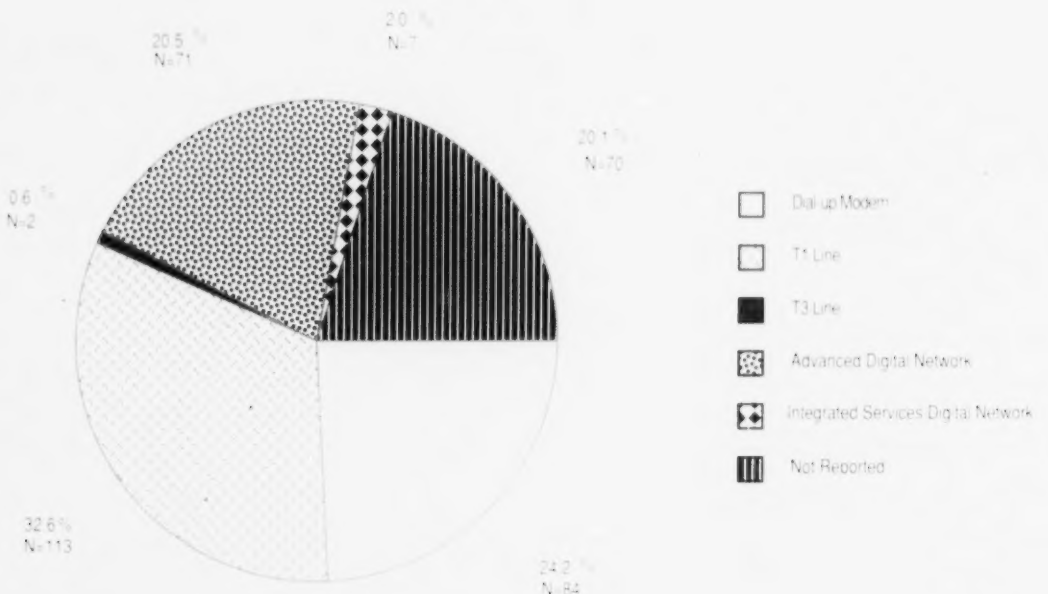
SOURCE: IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH, AND EVALUATION, TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE.

Internet Connectivity

Figure 6 depicts the percent of Iowa public school districts according to the predominant type of Internet connectivity or bandwidth for student Internet access. Table 15 further delineates this information according to public school district enrollment category. There were 276 or 79.5 percent of the 347 Internet enabled school districts that indicated the predominant type of Internet connectivity (modem, T1 leased line, T3 leased line, Advanced Digital Network (ADN), and Integrated Services Digital Network (ISDN)). Nearly one-third of the districts reporting Internet access used a T1 line. A dial-up modem was the next most frequently used type of connectivity with about one-quarter of the districts indicating its use. The Advanced Digital Network was the primary Internet connectivity for just over 20 percent of the districts, while T3 leased lines accounted for less than one percent of Internet connectivity. Just over 20 percent of the districts with student Internet access did not report the predominant Internet connectivity in use.

Figure 6

NUMBER AND PERCENT OF IOWA PUBLIC SCHOOL DISTRICTS BY TYPE OF PREDOMINANT INTERNET CONNECTIVITY 1996-97



SOURCE: IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH AND EVALUATION, TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE

Districts with the smallest enrollment category tended to report using a dial-up modem more frequently as the predominant Internet connectivity, while districts in the largest enrollment category tended to indicate the use of T1 leased lines as the predominant Internet connectivity. Overall, dial-up modems, T1 leased lines, and Advanced Digital Network accounted for more than 77 percent of Internet connectivity.

Table 15

NUMBER AND PERCENT OF IOWA PUBLIC SCHOOL DISTRICTS BY PREDOMINANT TYPE OF INTERNET CONNECTIVITY 1996 - 97

	Enrollment Category															
	<250		250-399		400-599		600-999		1,000-2,499		2,500-7,499		7,500+		Total	
Type of Connectivity	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Dial-Up (Modem)	10	50.0%	12	28.6%	13	20.3%	29	27.1%	16	19.8%	3	12.5%	1	11.1%	84	24.2%
T-1 Leased Line	3	15.0	10	23.8	12	18.8	32	29.9	37	45.7	15	62.5	4	44.4	113	32.6
T-3 Leased Line	0	0.0	0	0.0	2	3.1	0	0.0	0	0.0	0	0.0	0	0.0	2	0.6
Advanced Digital Network	0	0.0	8	19.0	13	20.3	24	22.4	19	23.5	5	20.8	2	22.2	71	20.5
Integrated Services Digital Network	0	0.0	1	2.3	2	3.1	1	0.9	2	2.5	1	4.2	0	0.0	7	2.0
Not Reported	7	35.0	11	26.3	22	34.4	21	19.7	7	8.5	0	0.0	2	22.3	70	20.1

SOURCE: IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH, AND EVALUATION, TECHNOLOGY SURVEY - 1996-97 TECHNOLOGY FILE

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Technology and Instruction

This section on the integration of technology by Iowa school districts examines Internet use as a part of instruction, the use of technology by instructional area, and remote access to classes.

Integration of Technology

The percentages of Iowa public school districts using the Internet as a part of instructional programs is displayed in Table 16. At the elementary (K-6) level, more than 60 percent of districts reported using the Internet as a part of instruction less than ten percent of the time, while only one-third of the districts reporting used the Internet less than ten percent of the time at the secondary (7-12) level. Just over 12 percent of the districts indicated using the Internet for elementary instruction 50 percent or more of the time compared to nearly 37 percent at the secondary level.

Table 16

IOWA PUBLIC SCHOOL DISTRICT PERCENTAGE OF INTERNET USE AS A PART OF INSTRUCTIONAL PROGRAMS — 1996-97

Level	Percent of Internet Use									
	<10%		10-24%		25-49%		50-79%		80+%	
	N	%	N	%	N	%	N	%	N	%
Elementary (K-6)	229	60.6	65	17.2	38	10.0	33	8.7	13	3.4
Secondary (7-12)	125	33.1	47	12.4	67	17.7	74	19.6	65	17.2

SOURCE: IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH, AND EVALUATION, TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE.

The percentage of time students used technology by instructional area is presented in Table 17. In the area of physical development (physiology) more than 85 percent of all districts reported that 50 percent, or more, of the instruction involved student use of technology. Foreign language instruction ranked second with 74.7 percent of all districts indicating that technology use by students was part of the instruction at least 50 percent of the time.

Table 17

PERCENT OF TIME IOWA PUBLIC SCHOOL STUDENTS USE TECHNOLOGY[1] IN VARIOUS INSTRUCTIONAL AREAS — 1996-97

Instructional Area	Percent of Technology Use					
	<10%	10-24%	25-49%	50-79%	80+%	Total
	Number of Districts					
Language Arts	26	68	94	111	53	352
Biological & Physical Science	5	39	78	127	102	351
Mathematics	9	31	61	117	131	349
Social Science	6	30	75	123	115	349
Physical Development (Physiology)	2	10	11	59	264	346
Fine Arts	5	27	53	92	169	346
Foreign Language	5	13	37	99	184	338
School-to-Work	20	36	52	70	141	319

SOURCE: IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH, AND EVALUATION. TECHNOLOGY SURVEY 1996-97 TECHNOLOGY FILE.

NOTE: [1]EXCLUDES DISTRICTS THAT CHECKED MORE THAN ONE PERCENTAGE INTERVAL PER INSTRUCTIONAL AREA.

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Remote Access of Students to Classes

The number and percent of Iowa public school districts using technology to enable student participation in classes from remote sites according to technology used is depicted in Table 18. Statewide, 51.2 percent of the public school districts used technology to enable students to take classes from remote sites. The range in district provisions for student remote access classes was from 29.2 percent for districts under 250 enrollment to 92 percent for districts in the 2,500-7,499 enrollment category.

Table 18

NUMBER AND PERCENT OF IOWA PUBLIC SCHOOL DISTRICTS BY TECHNOLOGY USED FOR REMOTE ACCESS 1996-97

	Enrollment Category							
	<250	250-399	400-599	600-999	1,000-2,499	2,500-7,499	7,500+	Total
Total Districts	24	46	76	116	83	25	9	379
Districts with Remote Site Student Participation								
Number of Districts	7	19	31	58	51	23	5	194
Percent	29.2	41.3	40.8	50.0	61.4	92.0	55.6	51.2
Technology Used								
Cable								
Number of Districts	1	3	3	6	6	3	1	23
Percent	4.2	6.5	3.9	5.2	7.2	12.0	11.1	6.1
Satellite								
Number of Districts	1	2	4	6	5	1	0	19
Percent	4.2	4.3	5.3	5.2	6.0	4.0	0.0	5.0
Interactive Television								
Number of Districts	0	6	5	4	7	2	1	25
Percent	0.0	13.0	6.6	3.4	8.4	8.0	11.1	6.6
ICN								
Number of Districts	4	14	23	53	47	23	5	169
Percent	16.7	30.4	30.3	45.7	56.6	92.0	55.6	44.6

SOURCE: IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH, AND EVALUATION. TECHNOLOGY SURVEY 1996-97 TECHNOLOGY FILE.

NOTE: SOME DISTRICTS INDICATED THE USE OF MULTIPLE REMOTE ACCESS TECHNOLOGIES.

Technology used to connect students to remote sites included cable, satellite dish, Interactive TV (ITV), and the Iowa Communications Network (ICN). The ICN was used for remote site access by 44.6 percent of school districts, with a range across enrollment categories of 16.7 percent in the smallest districts to 92 percent in districts with enrollments of 2,500-7,499. The incidence of ICN usage for remote access generally increased with increases in enrollment, with districts with enrollments of 7,500 and above being the exception. The other types of remote access technology were each used by less than seven percent of the districts. These included cable television, 6.1 percent; satellite dish, five percent; and ITV, 6.6 percent.

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Automated Student Record Systems

The automated student record component includes information on the number and percent of districts using automated student information systems and the uses made of automated student records by Iowa public school districts.

Automated Student Records

In 1996-97, nearly three of every four of Iowa's public school districts reported having automated student record systems and over 46 percent of the districts reported having K-12 automated student records, compared to 26.8 percent with K-12 automated student record systems in 1995-96. Generally, the incidence of automated student records increased with successive increases in enrollment categories (Table 19).

Table 20 reflects the uses being made of automated student record systems by school districts. Based on the percentage of district reported uses of automated student records in 1996-97, the most prevalent uses were for attendance, 75.2 percent; scheduling, 72.8 percent; and to record courses taken by students, 71.8 percent. In the previous school year these three categories were also the predominate uses made of automated student record systems with recording courses taken listed as the highest use followed by attendance and scheduling respectively.

Table 19

NUMBER AND PERCENT OF IOWA PUBLIC SCHOOL DISTRICTS USING AUTOMATED STUDENT RECORD SYSTEMS (ASRS) 1995-96 AND 1996-97

Enrollment Category	Number of Districts with ASRS		Percent of Districts with ASRS		Number of Districts with K-12 ASRS		Percent of Districts with K-12 ASRS	
	95-96	96-97	95-96	96-97	95-96	96-97	95-96	96-97
<250	7	6	26.9%	25.0%	2	2	7.7%	8.3%
250-399	29	30	58.0	65.2	11	21	22.0	45.7
400-599	57	57	70.4	75.0	20	32	24.7	42.1
600-999	73	86	67.6	74.1	35	53	32.4	45.7
1,000-2,499	62	70	72.9	84.3	22	40	25.9	48.2
2,500-7,499	21	22	84.0	88.0	7	20	28.0	80.0
7,500+	7	8	77.8	88.9	6	7	66.7	77.8
State	256	279	66.7	73.6	103	175	26.8	46.2

SOURCE: IOWA DEPARTMENT OF EDUCATION, USING COMPUTERS AND THE WORLD WIDE WEB, 1996 (SURVEY OF PUBLIC SCHOOL DISTRICTS JOINTLY SPONSORED BY IOWA STATE UNIVERSITY) AND IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH, AND EVALUATION, TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE.

Automated Student Record Uses

During 1996-97, a total of 34 or nine percent of public school districts used, tested, or were involved in preparation for using Electronic Data Interchange (EDI) to transmit student transcripts to post secondary institutions and to transmit student records to replace paper-based Department of Education Basic Educational Data Survey documents. Electronic Data Interchange is the transmission of data, from one entity to another, by electronic means utilizing standardized formats. In the prior year, only six districts or 1.6 percent of public school districts were involved in the use or preparation for use of EDI (Table 20).

Table 20

USES OF AUTOMATED STUDENT RECORD SYSTEMS IN IOWA PUBLIC SCHOOL DISTRICTS 1995-96 AND 1996-97

	Number of Districts		Percent of Districts	
Uses	95-96	96-97	95-96	96-97
Attendance	235	285	61.2%	75.2%
Courses Taken	237	272	61.7	71.8
Cumulative Folder	111	131	28.9	34.6
Demographics	139	196	48.9	51.7
Dropouts	109	161	28.4	42.5
EDI[1]	6	34	1.6	9.0
Scheduling	234	276	60.9	72.8
Other	39	58	10.2	15.3

SOURCE: IOWA DEPARTMENT OF EDUCATION, USING COMPUTERS AND THE WORLD WIDE WEB, 1996 (SURVEY OF PUBLIC SCHOOL DISTRICTS JOINTLY SPONSORED BY IOWA STATE UNIVERSITY) AND IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH, AND EVALUATION, TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE.

NOTE: [1]ELECTRONIC DATA INTERCHANGE (USE OR INTENDED USE TO TRANSMIT STUDENT TRANSCRIPTS TO POST SECONDARY INSTITUTIONS AND TO TRANSMIT DATA TO REPLACE PAPER-BASED BASIC EDUCATIONAL DATA SURVEY DOCUMENTS FOR DEPARTMENT OF EDUCATION REPORTS).

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Technology Support and Staff Development

The technology support and staff development section examines the average number of full-time equivalent technology support staff available to assist teachers. It also examines the distribution of staff development services provided by public school districts during the 1996-97 school year.

Technology Support

Statewide, the average number of full-time equivalent (FTE) technology staff designed to coordinate and support technology within Iowa public school districts, as reported in Table 21, was 1.1 FTE. The range in average FTE technology support staff was from .5 FTE staff in districts with enrollments under 250 to 3.1 FTE staff in districts with enrollments of 7,500 and above.

Table 21

NUMBER OF IOWA PUBLIC SCHOOL FULL-TIME EQUIVALENT TEACHERS SERVED PER FTE TECHNOLOGY SUPPORT STAFF 1996-97

Enrollment Category	Average Technology FTE's	Teachers Per FTE Technology Support Staff
<250	0.5	10.5
250-399	1.5	8.7
400-599	0.6	35.3
600-999	1.1	31.8
1,000-2,499	1.0	71.9
2,500-7,499	2.0	97.0
7,500+	3.1	248.2
State	1.1	58.6

SOURCE: IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH AND EVALUATION, TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE.

Overall, there was an average of 58.6 teachers per technology support FTE staff. Statewide, the range of teachers to FTE technology support staff was 8.7 in districts with enrollments of 250-399 to 248.2 teachers per FTE technology support staff in the largest districts. In general, the larger the enrollment category, the greater the number of teachers per FTE technology support staff.

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Areas of Technology Staff Development

Table 22 reflects technology staff development areas provided by local school districts. Statewide, the most predominant technology staff development areas were general Internet use and general computer use. In general, these two areas of staff development rates highest across enrollment categories. For the smallest districts, general Internet use and administrative uses were rated the highest. In the largest districts administrative uses and classroom technology application ranked highest of the staff development areas.

Table 22

PERCENT OF IOWA PUBLIC SCHOOL DISTRICTS PROVIDING TECHNOLOGY RELATED STAFF DEVELOPMENT 1996-97

	Enrollment Category							
	<250	250-399	400-599	600-999	1,000-2,499	2,500-7,499	7,500+	State
Area of Staff Development								
Administrative Uses	70.8%	63.0%	69.7%	70.7%	81.9%	92.0%	100.0%	73.9%
Classroom Tech. Application	66.7	84.8	84.2	76.7	88.0	80.0	100.0	81.5
General Computer Use	66.7	76.1	82.9	85.3	90.4	96.0	88.9	84.2
General Internet	70.8	89.1	78.9	83.6	91.6	96.0	77.8	84.7
ICN Classroom	16.7	34.8	28.9	35.3	34.9	80.0	66.7	36.1
Multimedia	33.3	52.2	48.7	46.6	60.2	84.0	77.8	52.8
Networks	37.5	37.0	42.1	37.9	54.2	60.0	55.6	43.3
Software/Hardware Instruction	45.8	63.0	69.7	55.2	68.7	72.0	66.7	62.5
Techniques for Using WWW	45.8	58.7	60.5	70.7	77.1	88.0	66.7	67.8
Technology Curriculum Integration	37.5	47.8	38.2	47.4	61.4	72.0	55.6	49.6
Video Conferencing	0	8.7	10.5	7.8	8.4	12.0	11.1	8.4
Other	8.3	2.2	5.3	1.7	6.0	12.0	11.1	4.7
Number of Districts Reporting	24	46	76	116	83	25	9	379

SOURCE: IOWA DEPARTMENT OF EDUCATION, BUREAU OF PLANNING, RESEARCH, AND EVALUATION. TECHNOLOGY SURVEY, 1996-97 TECHNOLOGY FILE.

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Appendices...

Appendix A — Technology Survey, 1996-97

Appendix B — Number of computers, percent of computers purchased in last two years, number of pupils per computer, Internet access status, remote access to classes status, and automated student record status for Iowa public school districts, 1996-97.

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APPENDIX A

Technology Survey, 1996-97

Due Date: May 22, 1997

State of Iowa
DEPARTMENT OF EDUCATION
Bureau of Planning, Research and Evaluation
Grimes State Office Building
Des Moines, Iowa 50319-0146

Technology Survey 1996-97

District No. _ _ _ _ _

District Name _____

Person Completing Form _____

Phone Number _____

DIRECTIONS: Please provide district level data for survey questions as indicated.

A. Computer/Hardware Technology

1. Indicate, by type of computer and grade level, the number of in-school computers to which students have regular access.

Type of Computer	Total Number of Computers		Number Purchased in	
	Elementary (PK-6)	Secondary (7-12)	1995-96	1996-97
PC (DOS/Windows)	_____	_____	_____	_____
Macintosh/Power Mac	_____	_____	_____	_____
Apple (Apple II series)	_____	_____		

2. Indicate the percent of in-school computers by location. (*Use whole percents*)

_____% Computer Lab _____% Classrooms _____% Library/Media Center

3. Indicate which of the following technology hardware is utilized by the district. (*Check all that apply*)

Type of Technology			
___	Cable Television	___	ICN
___	CD ROM	___	Modem
___	Computer Network (LAN)	___	Satellite Dish
___	Computer Network (WAN)	___	Scanner
___	Digital Camera	___	Video Disc

B. Internet Uses and Software

4. Indicate the **predominant** operating system used to support Internet access for students. (*Check only one*)

___	DOS Only	___	Macintosh Operating System
___	Windows 95	___	Other (*Please specify*) _____
___	Windows 3.1		

• *For Assistance Contact: Steve Boal (515-281-4730).* •

5. Check each of the applications of the Internet to which **elementary students** (*grades PK-6*) have regular in-school access by instructional setting. (*Check all that apply*)

	Instructional Setting		
	Computer Lab	Class-rooms	Library/ Media Center
___ No Access (If "*No Access*" proceed to item 6)			
E-mail	___	___	___
File Transfer Protocol (FTP)	___	___	___
Gopher Server	___	___	___
List Servers	___	___	___
News Groups	___	___	___
Word Wide Web	___	___	___

6. Check each of the applications of the Internet to which **secondary students** (*grades 7-12*) have regular in-school access by instructional setting. (*Check all that apply*)

	Instructional Setting		
	Computer Lab	Class-rooms	Library/ Media Center
___ No Access (If "*No Access*" proceed to item 13)			
E-mail	___	___	___
File Transfer Protocol (FTP)	___	___	___
Gopher Server	___	___	___
List Servers	___	___	___
News Groups	___	___	___
Word Wide Web	___	___	___

7. Check **all** Internet web browsers in use by students.

___ Netscape
___ MicroSoft Internet Explorer
___ Mosaic
___ MacWeb
___ Other (*Please specify*)_____

8. Indicate the **primary** Internet web browser used by students. (*Check only one*)

___ Netscape
___ Mosaic
___ Microsoft Internet Explorer
___ Other (*Please specify*) _____
___ MacWeb

9. Indicate whether your district has a homepage on the World Wide Web

___ Yes (*If yes, specify URL/address*_____)
___ No (*If no skip to question 13*)

10. If your district has a homepage indicate the **primary** developer(s) of the web site. (*Check only one*)

___ Staff Only
___ Combination of Staff and Students
___ Students Only
___ Third Party Developer

11. Indicate the **predominant** type of Internet connectivity (bandwidth). *(Check only one)*

Dial Up-Link	Direct Link
___ Modem	___ T1 (leased line 1.544 kilobytes per second)
	___ T3 (leased line 44.736 kilobytes per second)
	___ Advanced Digital Network (leased line 56 kilobytes per second)
	___ Integrated Services Digital Network

C. Instructional Integrated Technology

12. Estimate the percentage of students by grade level who use the Internet as a part of their instructional program.

Elementary (PK-6)	Secondary (7-12)
____ %	____ %

13. Indicate the percent of time students use technology in each of the following instructional areas.

Instructional Area	80% or More (1)	50% to 79% (2)	25% to 49% (3)	10% to 24% (4)	Less Than 10% (5)
Language Arts	____	____	____	____	____
Biological and Physical Science	____	____	____	____	____
Mathematics	____	____	____	____	____
Social Science	____	____	____	____	____
Physical Development & Health (physiology)	____	____	____	____	____
Fine Arts	____	____	____	____	____
Foreign Language	____	____	____	____	____
School-to-Work	____	____	____	____	____

14. Can students participate in classes from remote sites?

___ Yes *(Please complete item 15)* ___ No *(Skip to item 16)*

15. Indicate the technology used to connect students to remote sites. *(Check all that apply)*

___ Cable TV ___ Satellite
___ Interactive TV (ITV) ___ ICN

D. Automated Student Record System

16. Does your district have an automated student record system?

___ Yes ___ No

17. Indicate the hardware platform(s) on which the automated student record system resides. *(Check all that apply)*

___ Macintosh Operating System ___ PC (DOS/Windows)
___ Mainframe ___ Other *(Please specify)* _____

☛ Please turn the page to complete survey

18. Indicate the software/vendor utilized for elementary and secondary automated student records by appropriate grade level. *(Check all that apply)*

Software/ Vendor Used	Elementary (PK-6)	Secondary (7-12)	Software/ Vendor Used	Elementary (PK-6)	Secondary (7-12)
Bush Software	____	____	School Master/Olympia Computing	____	____
CIMS/National Computer Sys.	____	____	School System (DOS)/McGraw-Hill	____	____
ESSIS/ECI	____	____	School System (Win)/McGraw-Hill	____	____
ForePoint	____	____	SCT Education Systems	____	____
Garron	____	____	SIMS/WOS Accounting	____	____
High Touch	____	____	Supply Tech	____	____
JMC	____	____	The Tremont System	____	____
Mac School/Chancery Software	____	____	Win School/Chancery Software	____	____
SASI/Macro Education Systems	____	____	Other *(Please specify)*	____	____
			_____		

19. Check the purpose(s) for which your automated student record system is used and the grade level(s) included. *(Check all that apply)*

Purpose	Elementary (PK-6)	Secondary (7-12)	Purpose	Elementary (PK-6)	Secondary (7-12)
Cumulative Folder	____	____	Student Attendance	____	____
Courses Taken/Credits Earned	____	____	Student Demographics	____	____
Dropouts	____	____	(e.g. race, gender, LEP)		
Health Records	____	____	Other *(Please specify)*	____	____
Scheduling	____	____	_____		

E. Staff Development

20. Indicate the number of full-time equivalent (FTE) staff designated to coordinate and support technology within your district.

____ ____ FTE *(round to nearest tenth)* ____ No FTE designated

21. Have district staff **participated** in staff development opportunities related to the use of technology during the 1996-97 school year?

___ Yes ___ No

22. Check from the categories below **all** areas for which staff development has been provided within the past year? *(Check all that apply)*

Areas of Staff Development

___ Administrative Uses (e.g., grading, scheduling, word processing)
___ Classroom Technology Applications
___ General Computer Use
___ General Internet
___ ICN Classroom
___ Multimedia
___ Networks
___ Software/Hardware Instruction
___ Techniques for using the WWW
___ Technology Curriculum Integration
___ Video Conferencing
___ Other *(Please specify)*
_____

MAIL COMPLETED FORM TO:
Steve Boal
Iowa Department of Education
Bureau of Planning, Research, and Evaluation
Grimes State Office Building
Des Moines, Iowa 50319-0146

APPENDIX B

Number of Computers, Percent of Computers Purchased In Last Two Years, Number of Pupils Per Computer, Internet Access Status, Remote Access To Classes Status and Automated Student Record Status For Iowa Public School Districts, 1996-97

IOWA PUBLIC SCHOOL DISTRICTS
NUMBER OF COMPUTERS, PERCENT OF COMPUTERS PURCHASED IN LAST TWO YEARS,
NUMBER OF PUPILS PER COMPUTER, INTERNET ACCESS STATUS,
REMOTE ACCESS TO CLASSES STATUS AND AUTOMATED STUDENT RECORD STATUS
SOURCE: IOWA DEPARTMENT OF EDUCATION, TECHNOLOGY SURVEY FILE, 1996-97

DISTRICT NAME	TOTAL NUMBER OF COMPUTERS	% OF COMPUTERS PURCHASED LAST 2 YEARS	NUMBER OF PUPILS PER COMPUTER	INTERNET ACCESS STATUS	REMOTE ACCESS TO CLASSES STATUS	AUTOMATED STUDENT RECORD STATUS
A-H-S-T	170	12.9	4.4	NO	NO	YES
ACKLEY-GENEVA	136	32.4	4.4	YES	YES	YES
ADAIR-CASEY	117	30.8	4.0	YES	YES	YES
ADEL-DE SOTO-MINBURN	505	33.1	3.0	YES	YES	YES
AKRON WESTFIELD	270	97.8	2.4	YES	NO	YES
ALBERT CITY-TRUESDALE	81	0.0	4.5	YES	NO	YES
ALBIA	170	39.4	8.1	YES	NO	YES
ALBURNETT	83	24.1	7.6	YES	YES	YES
ALDEN	85	31.8	4.9	YES	YES	YES
ALGONA	252	35.3	5.7	YES	NO	YES
ALLAMAKEE	145	56.6	11.4	YES	YES	YES
ALLISON-BRISTOW	52	0.0	7.8	NO	YES	YES
ALTA	165	40.0	4.0	YES	YES	NO
AMES	540	7.0	9.2	YES	YES	YES
ANAMOSA	258	17.4	5.5	YES	YES	NO
ANDREW	115	1.7	3.2	YES	NO	YES
ANITA	90	44.4	4.3	YES	NO	YES
ANKENY	966	35.6	5.4	YES	YES	YES
ANTHON-OTO	117	44.4	3.0	YES	NO	NO
APLINGTON	115	56.5	3.4	YES	NO	YES
AR-WE-VA	119	41.2	3.9	YES	NO	NO
ARMSTRONG-RINGSTED	116	36.2	4.2	YES	YES	YES
ATLANTIC	254	36.6	7.2	YES	YES	YES
AUDUBON	184	14.7	4.4	YES	NO	YES
AURELIA	91	36.3	4.6	YES	NO	YES
BALLARD	156	35.3	8.3	YES	NO	YES
BATTLE CREEK-IDA GROVE	216	33.8	4.2	YES	YES	NO
BAXTER	100	34.0	3.4	NO	YES	YES
BCLUW	134	39.6	5.2	YES	YES	YES
BEDFORD	146	2.7	4.4	YES	YES	YES
BELLE PLAINE	118	25.4	7.0	YES	NO	YES
BELLEVUE	178	9.0	3.9	YES	YES	YES
BELMOND-KLEMME	132	11.4	7.3	YES	NO	YES
BENNETT	33	51.5	9.1	YES	YES	YES

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BENTON	206	36.9	8.4	YES	YES	YES
BETTENDORF	611	23.6	7.5	YES	NO	YES
BONDURANT-FARRAR	220	21.8	3.8	YES	NO	YES
BOONE	283	18.0	8.6	YES	NO	YES
BOYDEN-HULL	116	21.6	5.0	YES	NO	YES
BOYER VALLEY	117	8.5	5.5	YES	NO	YES
BRIDGEWATER-FONTANELLE	64	15.6	4.9	YES	NO	NO
BROOKLYN-GUERNSEY-MALCOM	145	32.4	4.5	YES	YES	YES
BURLINGTON	953	18.9	5.8	YES	YES	YES
BURT	30	23.3	7.1	YES	NO	NO
C AND M	80	17.5	3.6	YES	NO	YES
CAL	107	43.9	3.3	YES	YES	YES
CALAMUS/WHEATLAND	94	18.1	5.4	YES	YES	NO
CAMANCHE	152	19.7	7.0	YES	NO	NO
CARDINAL	115	14.8	6.1	YES	NO	YES
CARLISLE	241	33.6	5.3	YES	NO	YES
CARROLL	243	34.2	7.6	YES	NO	YES
CEDAR FALLS	1,058	37.5	4.5	YES	YES	YES
CEDAR RAPIDS	2,529	19.7	7.1	YES	NO	YES
CENTER POINT-URBANA	213	28.2	4.5	YES	NO	NO
CENTERVILLE	302	18.9	6.0	YES	NO	YES
CENTRAL	226	35.0	3.3	YES	NO	YES
CENTRAL CITY	49	28.6	11.4	YES	NO	NO
CENTRAL CLINTON	290	17.2	5.5	YES	NO	YES
CENTRAL DECATUR	144	35.4	4.3	YES	NO	YES
CENTRAL LEE	150	73.3	7.5	YES	NO	YES
CENTRAL LYON	228	52.6	3.6	NO	YES	YES
CHARITON	197	28.4	7.3	YES	NO	YES
CHARLES CITY	342	25.7	5.7	YES	YES	YES
CHARTER OAK-UTE	75	24.0	4.2	YES	YES	NO
CHEROKEE	347	49.0	3.8	YES	YES	YES
CLARINDA	118	66.1	9.3	YES	NO	YES
CLARION-GOLDFIELD	106	5.7	9.4	YES	NO	YES
CLARKE	281	23.1	5.2	YES	NO	YES

IOWA PUBLIC SCHOOL DISTRICTS
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CLARKSVILLE	87	32.2	5.0	YES	NO	YES
CLAY CENTRAL/EVERLY	118	50.8	5.2	YES	NO	YES
CLEAR CREEK-AMANA	250	30.0	4.5	YES	NO	NO
CLEAR LAKE	278	29.5	5.8	YES	NO	YES
CLEARFIELD	49	14.3	3.0	YES	YES	NO
CLINTON	645	32.6	7.8	YES	YES	YES
COLFAX-MINGO	139	47.5	6.5	YES	YES	NO
COLLEGE	766	45.2	3.6	YES	YES	YES
COLLINS-MAXWELL	136	24.3	3.9	YES	NO	NO
COLO-NESCO	65	52.3	10.7	YES	NO	YES
COLUMBUS	120	47.5	8.2	YES	NO	YES
COON RAPIDS-BAYARD	121	18.2	5.3	YES	YES	YES
CORNING	108	5.6	6.1	NO	YES	YES
CORWITH-WESLEY	71	28.2	3.0	NO	YES	YES
COUNCIL BLUFFS	1,335	13.7	7.9	YES	YES	YES
CRESTON	350	18.9	4.7	YES	NO	YES
DALLAS CENTER-GRIMES	184	46.7	7.7	YES	NO	YES
DANVILLE	119	47.1	4.5	YES	NO	YES
DAVENPORT	3,391	0.0	5.2	YES	YES	NO
DAVIS COUNTY	225	36.9	6.2	YES	YES	YES
DECORAH	477	34.8	3.6	YES	NO	YES
DEEP RIVER-MILLERSBURG	41	58.5	5.7	NO	NO	NO
DELWOOD	82	29.3	3.2	YES	NO	NO
DENISON	286	35.0	5.6	YES	YES	YES
DENVER	190	9.5	4.2	YES	NO	YES
DES MOINES INDEPENDENT	2,974	14.9	10.8	YES	YES	YES
DEXFIELD	98	24.5	5.0	NO	NO	YES
DIAGONAL	25	24.0	6.0	YES	NO	NO
DIKE-NEW HARTFORD	224	9.4	3.9	YES	NO	YES
DOWS	65	46.2	3.2	YES	YES	YES
DUBUQUE	1,160	22.4	8.7	YES	YES	YES
DUNKERTON	89	15.7	6.4	YES	NO	YES
DURANT	143	21.0	4.5	YES	NO	NO
EAGLE GROVE	225	35.6	4.5	YES	NO	YES

IOWA PUBLIC SCHOOL DISTRICTS
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EARLHAM	137	19.7	3.5	NO	YES	YES
EAST BUCHANAN	140	27.9	4.8	YES	NO	YES
EAST CENTRAL	116	26.7	4.4	YES	NO	YES
EAST GREENE	121	11.6	4.0	YES	NO	YES
EAST MARSHALL	209	21.1	4.1	YES	YES	YES
EAST MONONA	40	47.5	5.3	YES	NO	NO
EAST UNION	151	36.4	3.9	YES	NO	YES
EASTERN ALLAMAKEE	57	21.1	9.5	YES	NO	YES
EDDYVILLE-BLAKESBURG	112	26.8	8.2	YES	YES	YES
EDGEWOOD-COLESBURG	122	43.4	5.6	YES	NO	YES
ELDORA-NEW PROVIDENCE	130	48.5	6.1	YES	YES	NO
ELK HORN-KIMBALLTON	68	13.2	4.8	YES	YES	YES
EMMETSBURG	260	36.5	3.5	YES	YES	YES
ENGLISH VALLEYS	109	12.8	4.4	YES	NO	YES
ESSEX	60	18.3	5.2	YES	NO	NO
ESTHERVILLE	431	41.5	3.9	YES	YES	NO
EXIRA	78	17.9	5.0	YES	YES	YES
FAIRFIELD	413	10.9	5.3	YES	YES	YES
FARRAGUT	57	21.1	6.5	YES	YES	YES
FOREST CITY	261	13.4	5.7	YES	YES	YES
FORT DODGE	536	38.2	9.0	YES	YES	YES
FORT MADISON	383	18.5	7.3	YES	YES	YES
FOX VALLEY	65	16.9	3.1	YES	YES	NO
FREDERICKSBURG	66	16.7	6.1	YES	NO	YES
FREMONT	47	0.0	4.8	YES	NO	NO
FREMONT-MILLS	71	26.8	7.1	YES	YES	YES
GALVA-HOLSTEIN	157	43.9	4.3	YES	NO	NO
GARNAVILLO	31	12.9	9.9	YES	YES	NO
GARNER-HAYFIELD	165	38.2	5.5	YES	YES	YES
GEORGE	113	25.7	3.6	YES	YES	YES
GILBERT	130	54.6	6.1	YES	YES	YES
GILMORE CITY-BRADGATE	15	80.0	17.5	YES	NO	NO
GLADBROOK	78	12.8	4.6	YES	NO	YES
GLENWOOD	214	0.0	9.4	YES	YES	YES

IOWA PUBLIC SCHOOL DISTRICTS

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GLIDDEN-RALSTON	25	24.0	17.7	YES	NO	YES
GMG	81	40.7	5.1	YES	YES	YES
GRAETTINGER	121	29.8	2.4	YES	YES	YES
GRAND	44	0.0	4.8	NO	NO	NO
GRAND VALLEY	45	26.7	4.4	YES	NO	NO
GREENE	85	36.5	4.7	YES	YES	YES
GREENFIELD	62	38.7	9.7	YES	NO	YES
GRINNELL-NEWBURG	438	43.4	4.5	YES	NO	YES
GRISWOLD	185	28.6	4.0	YES	YES	YES
GRUNDY CENTER	76	25.0	8.8	YES	YES	YES
GUTHRIE CENTER	192	42.2	2.7	YES	YES	YES
GUTTENBERG	96	10.0	6.3	YES	YES	YES
H-L-V	89	0.0	5.7	YES	YES	NO
HAMBURG	79	13.9	4.7	NO	NO	NO
HAMPTON-DUMONT	243	58.8	5.6	YES	YES	YES
HARLAN	219	71.7	7.7	YES	YES	YES
HARMONY	72	5.6	8.6	NO	NO	YES
HARRIS-LAKE PARK	130	23.1	2.8	YES	YES	YES
HARTLEY-MELVIN-SANBORN	243	38.7	4.0	YES	NO	YES
HIGHLAND	94	30.9	6.6	YES	NO	NO
HINTON	81	49.4	7.6	YES	NO	YES
HOWARD-WINNESHIEK	300	24.0	5.5	YES	YES	YES
HUBBARD-RADCLIFFE	163	27.0	3.7	YES	YES	YES
HUDSON	188	39.4	4.2	YES	YES	NO
HUMBOLDT	212	47.6	6.7	YES	YES	YES
IKM	163	76.7	3.8	YES	YES	YES
INDEPENDENCE	240	29.6	7.2	YES	YES	YES
INDIANOLA	616	18.7	5.3	YES	YES	YES
INTERSTATE 35	138	19.6	6.1	YES	NO	NO
IOWA CITY	1,363	32.6	7.7	YES	NO	YES
IOWA FALLS	242	16.5	5.2	YES	YES	YES
IOWA VALLEY	122	45.1	5.9	YES	NO	YES
JANESVILLE CONSOLIDATED	105	10.0	3.7	YES	NO	YES
JEFFERSON- SCRANTON	276	26.4	4.8	YES	YES	YES

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JESUP	76	13.2	12.9	YES	YES	NO
JOHNSTON	561	38.9	5.7	YES	YES	YES
KEOKUK	284	28.2	9.1	YES	YES	YES
KEOTA	69	43.5	6.4	YES	NO	YES
KINGSLEY-PIERSON	130	41.5	4.1	YES	NO	YES
KNOXVILLE	258	45.3	8.2	YES	YES	YES
LAKE MILLS	110	31.8	7.4	YES	YES	YES
LAMONI	186	66.1	2.2	YES	YES	YES
LAURENS-MARATHON	140	13.6	3.9	YES	NO	YES
LAWTON-BRONSON	116	24.1	5.4	YES	NO	NO
LE MARS	176	44.3	12.8	YES	YES	YES
LENOX	91	27.5	4.8	YES	NO	YES
LEWIS CENTRAL	275	44.4	9.2	NO	YES	YES
LINCOLN CENTRAL (STUDENTS FROM LINCOLN CENTRAL ARE TUITIONED TO ESTHERVILLE)						
LINEVILLE-CLIO	22	9.1	5.3	YES	NO	NO
LINN-MAR	463	60.9	9.3	YES	YES	YES
LISBON	47	27.7	12.9	YES	YES	NO
LITTLE ROCK	45	0.0	4.3	YES	NO	NO
LOGAN-MAGNOLIA	115	44.3	5.9	NO	YES	YES
LONE TREE	63	84.1	6.4	YES	NO	YES
LOUISA-MUSCATINE	232	61.6	4.3	YES	NO	YES
LU VERNE	91	6.6	1.5	YES	NO	YES
LYNNVILLE-SULLY	124	24.2	4.3	YES	NO	YES
MADRID	155	22.6	3.8	NO	NO	YES
MALVERN	36	83.3	10.1	YES	YES	YES
MANNING	127	36.2	4.4	YES	YES	YES
MANSON NORTHWEST WEBSTER	171	38.6	5.1	YES	YES	YES
MAPLE VALLEY	212	24.1	3.0	YES	YES	YES
MAQUOKETA	247	65.6	6.7	YES	YES	YES
MAQUOKETA VALLEY	173	26.6	6.2	YES	NO	YES
MARCUS-MERIDEN-CLEGHORN	101	6.9	6.6	YES	NO	YES
MARION INDEPENDENT	306	44.1	5.6	YES	YES	NO
MARSHALLTOWN	94	34.5	53.2	YES	YES	YES
MARTENSDALE-ST MARYS	80	23.8	6.8	YES	NO	NO

IOWA PUBLIC SCHOOL DISTRICTS

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MASON CITY	770	18.8	6.3	YES	YES	YES
MEDIAPOLIS	177	60.5	5.8	YES	NO	YES
MELCHER-DALLAS	100	25.0	5.1	YES	YES	YES
MESERVEY-THORNTON	54	16.7	4.2	NO	NO	NO
MFL MAR MAC	208	37.0	5.4	YES	NO	YES
MID-PRAIRIE	241	25.7	5.1	YES	NO	NO
MIDLAND	130	33.8	6.6	YES	NO	NO
MISSOURI VALLEY	180	40.6	5.4	YES	YES	NO
MOC-FLOYD VALLEY	295	37.3	5.0	YES	YES	YES
MONTEZUMA	123	62.6	4.8	YES	YES	YES
MONTICELLO	150	56.7	7.5	YES	NO	YES
MORAVIA	60	51.7	6.9	NO	NO	YES
MORMON TRAIL	100	23.0	3.7	YES	NO	YES
MORNING SUN	39	35.9	6.5	YES	NO	NO
MOULTON-UDELL	54	1.9	5.6	YES	YES	NO
MOUNT AYR	208	48.1	4.0	YES	YES	YES
MOUNT PLEASANT	329	20.7	6.6	YES	NO	YES
MOUNT VERNON	187	35.8	5.5	YES	YES	YES
MURRAY	84	42.9	3.8	YES	NO	YES
MUSCATINE	1,122	25.8	5.0	YES	YES	NO
NASHUA	900	13.3	0.7	YES	YES	YES
NEVADA	355	42.0	4.6	YES	YES	YES
NEW HAMPTON	233	27.5	6.1	YES	YES	YES
NEW LONDON	107	36.4	5.2	YES	NO	YES
NEW MARKET	47	0.0	4.6	YES	NO	NO
NEWELL-FONDA	154	38.3	3.5	YES	YES	YES
NEWTON	1,125	20.4	3.2	YES	YES	YES
NISHNA VALLEY	331	0.0	1.0	YES	YES	YES
NORA SPRINGS-ROCK FALLS	28	57.1	18.3	YES	YES	NO
NORTH CEDAR	153	26.8	6.4	YES	NO	NO
NORTH CENTRAL	146	40.4	4.2	YES	YES	YES
NORTH FAYETTE	283	9.5	4.3	YES	YES	YES
NORTH IOWA	61	68.9	10.7	YES	YES	NO
NORTH KOSSUTH	119	23.5	4.1	NO	YES	YES

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SOURCE: IOWA DEPARTMENT OF EDUCATION, TECHNOLOGY SURVEY FILE, 1996-97

DISTRICT NAME	TOTAL NUMBER OF COMPUTERS	% OF COMPUTERS PURCHASED LAST 2 YEARS	NUMBER OF PUPILS PER COMPUTER	INTERNET ACCESS STATUS	REMOTE ACCESS TO CLASSES STATUS	AUTOMATED STUDENT RECORD STATUS
NORTH LINN	96	67.7	7.9	NO	NO	NO
NORTH MAHASKA	150	26.0	4.1	YES	YES	YES
NORTH POLK	126	63.5	7.1	YES	YES	YES
NORTH SCOTT	205	53.2	15.0	YES	YES	YES
NORTH TAMA COUNTY	198	30.8	3.0	YES	NO	YES
NORTH WINNESHIEK	65	36.9	6.2	YES	NO	YES
NORTHEAST	131	26.7	5.9	YES	NO	YES
NORTHEAST HAMILTON	113	46.0	3.2	YES	YES	YES
NORTHWOOD-KENSETT	137	23.4	4.4	NO	YES	YES
NORWALK	303	0.0	6.5	YES	YES	YES
ODEBOLT-ARTHUR	157	45.2	3.2	YES	NO	YES
OELWEIN	268	50.4	6.3	YES	YES	YES
OGDEN	156	24.4	4.9	YES	NO	YES
OKOBOJI	176	18.2	5.9	YES	YES	NO
OLIN CONSOLIDATED	56	16.1	5.8	YES	YES	YES
ORIENT-MACKSBURG	87	17.2	4.3	YES	NO	YES
OSAGE	216	22.7	5.4	YES	YES	YES
OSKALOOSA	305	0.0	8.9	YES	YES	YES
OTTUMWA	727	9.6	6.8	YES	YES	YES
PANORAMA	114	21.9	6.9	YES	NO	YES
PARKERSBURG	140	68.6	4.1	YES	NO	YES
PATON-CHURDAN	61	29.5	3.8	YES	YES	YES
PCM	278	15.8	3.8	YES	NO	YES
PEKIN	142	36.6	5.6	YES	NO	YES
PELLA	433	47.1	4.7	YES	NO	YES
PERRY	87	60.9	20.1	YES	YES	YES
PLAINFIELD	79	46.8	3.6	YES	NO	YES
PLEASANT VALLEY	782	26.2	4.0	YES	NO	NO
PLEASANTVILLE	174	33.9	4.0	YES	YES	YES
POCAHONTAS AREA	230	26.5	3.8	YES	YES	YES
POMEROY-PALMER	80	55.0	4.9	YES	NO	NO
POSTVILLE	127	43.3	5.4	YES	NO	YES
PRAIRIE VALLEY	170	42.4	5.5	YES	YES	YES
PRESCOTT	21	71.4	6.0	YES	NO	NO

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PRESTON	94	31.9	4.1	YES	NO	YES
RED OAK	331	32.6	4.3	YES	YES	YES
REINBECK	104	20.2	4.6	YES	NO	YES
REMSEN-UNION	84	29.8	5.9	YES	YES	YES
RICEVILLE	85	47.1	6.5	YES	NO	NO
RIVER VALLEY	244	8.2	2.7	YES	NO	YES
RIVERSIDE	255	40.0	3.3	YES	YES	YES
ROCK VALLEY	138	21.0	4.1	YES	YES	YES
ROCKWELL CITY-LYTTON	134	8.2	5.1	YES	YES	YES
ROCKWELL-SWALEDALE	163	33.7	2.8	NO	NO	YES
ROLAND-STORY	282	16.0	3.9	YES	YES	YES
RUDD-ROCKFORD-MARBLE RK	98	77.6	7.0	YES	YES	YES
RUSSELL	45	17.8	5.0	YES	NO	YES
RUTHVEN-AYRSHIRE	106	30.2	2.9	YES	NO	YES
SAC	96	52.1	5.7	YES	YES	YES
SAYDEL CONSOLIDATED	360	10.0	4.2	YES	YES	YES
SCHALLER-CRESTLAND	235	51.1	2.7	YES	YES	YES
SCHLESWIG	42	0.0	8.0	NO	NO	NO
SENTRAL	63	19.0	5.1	YES	YES	YES
SERGEANT BLUFF-LUTON	405	30.9	2.8	YES	YES	YES
SEYMOUR	51	0.0	8.4	NO	NO	YES
SHEFFIELD-CHAPIN	37	32.4	10.5	NO	NO	NO
SHELDON	161	31.1	7.4	YES	NO	YES
SHENANDOAH	92	17.4	13.5	YES	NO	YES
SIBLEY-OCHEYEDAN	214	21.0	4.8	YES	YES	YES
SIDNEY	29	3.4	15.3	NO	YES	YES
SIGOURNEY	146	28.1	5.5	YES	YES	YES
SIOUX CENTER	129	57.4	7.0	YES	YES	YES
SIOUX CENTRAL	183	32.8	3.5	YES	NO	NO
SIOUX CITY	1,454	24.8	10.1	YES	NO	YES
SOLON	96	12.5	10.6	YES	YES	YES
SOUTH CLAY	45	33.3	4.9	YES	NO	NO
SOUTH HAMILTON	156	33.3	5.2	YES	NO	YES
SOUTH O'BRIEN	170	0.0	5.7	YES	NO	YES

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SOUTH PAGE	59	20.3	6.8	YES	YES	YES
SOUTH TAMA COUNTY	238	18.5	7.2	YES	YES	YES
SOUTH WINNESHIEK	187	21.4	4.0	YES	NO	NO
SOUTHEAST POLK	832	18.0	4.9	YES	YES	YES
SOUTHEAST WARREN	138	6.5	5.0	YES	NO	NO
SOUTHEAST WEBSTER	81	49.4	7.2	YES	YES	NO
SOUTHERN CAL	170	47.1	4.2	YES	NO	YES
SPENCER	656	37.7	3.4	YES	YES	YES
SPIRIT LAKE	245	37.1	5.3	YES	YES	YES
SPRINGVILLE	97	21.6	5.2	YES	YES	NO
ST ANSGAR	175	32.6	4.3	YES	YES	YES
STANTON	109	14.7	2.6	YES	NO	YES
STARMONT	171	32.7	5.5	YES	NO	YES
STORM LAKE	362	12.7	4.7	YES	YES	YES
STRATFORD	55	43.6	4.0	YES	NO	NO
STUART-MENLO	149	10.1	4.1	NO	YES	YES
SUMNER	126	0.8	5.8	YES	NO	YES
TERRIL	68	35.3	4.0	YES	YES	NO
TIPTON	200	41.5	4.8	YES	YES	YES
TITONKA CONSOLIDATED	36	0.0	6.6	YES	NO	YES
TREYNOR	85	30.6	5.8	YES	NO	YES
TRI-CENTER	100	55.0	7.8	YES	YES	YES
TRI-COUNTY	115	0.0	3.9	YES	NO	NO
TRIPOLI	113	32.7	4.5	YES	YES	YES
TURKEY VALLEY	91	20.9	6.5	YES	NO	YES
TWIN CEDARS	101	39.6	4.8	YES	NO	NO
TWIN RIVERS	73	15.1	3.8	YES	NO	YES
UNDERWOOD	48	16.7	13.7	YES	YES	YES
UNION	302	0.0	4.1	NO	YES	YES
UNITED	96	34.4	4.3	NO	NO	NO
URBANDALE	748	31.1	4.4	YES	YES	YES
VALLEY	134	11.2	4.4	YES	NO	NO
VAN BUREN	147	14.3	4.7	YES	YES	YES
VAN METER	79	49.4	6.3	YES	NO	NO

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VENTURA	60	33.3	5.3	YES	YES	YES
VILLISCA	108	27.8	4.5	YES	YES	YES
VINTON-SHELLSBURG	288	12.2	6.9	YES	YES	YES
WACO	124	49.2	5.1	YES	NO	YES
WALL LAKE VIEW AUBURN	226	51.8	3.2	YES	NO	YES
WALNUT	88	0.0	3.5	YES	NO	YES
WAPELLO	134	25.4	6.2	YES	YES	YES
WAPSIE VALLEY	168	13.1	4.7	YES	NO	YES
WASHINGTON	293	8.5	6.2	YES	YES	YES
WATERLOO	1,202	27.3	9.3	YES	NO	YES
WAUKEE	268	35.4	5.8	YES	NO	YES
WAVERLY-SHELL ROCK	378	28.8	5.7	YES	YES	YES
WAYNE	171	11.7	4.3	YES	YES	YES
WEBSTER CITY	220	22.3	7.9	YES	YES	YES
WELLSBURG-STEAMBOAT ROCK	86	30.2	4.7	YES	YES	NO
WEST BEND-MALLARD	125	29.6	4.0	YES	NO	YES
WEST BRANCH	86	59.3	9.6	YES	NO	NO
WEST BURLINGTON IND	120	11.7	4.0	YES	NO	YES
WEST CENTRAL	84	78.6	4.9	YES	NO	NO
WEST DELAWARE COUNTY	163	35.6	12.7	YES	YES	YES
WEST DES MOINES	1,646	29.5	5.2	YES	YES	YES
WEST HANCOCK	196	40.8	4.1	YES	YES	YES
WEST HARRISON	53	15.1	9.6	NO	YES	NO
WEST LIBERTY	358	34.1	3.5	YES	NO	YES
WEST LYON	187	39.0	4.7	YES	NO	YES
WEST MARSHALL	170	53.5	5.0	YES	YES	YES
WEST MONONA	141	48.2	5.3	YES	NO	YES
WEST SIOUX	161	26.7	5.2	YES	YES	YES
WESTERN DUBUQUE	830	15.2	3.3	YES	YES	YES
WESTWOOD	175	26.9	4.6	YES	YES	YES
WHITING	74	10.8	3.6	YES	NO	NO
WILLIAMSBURG	90	22.2	10.9	NO	NO	YES
WILTON	225	26.2	4.2	YES	NO	NO
WINFIELD-MT UNION	116	46.6	3.9	YES	NO	YES

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WINTERSET	225	20.0	7.2	YES	YES	YES
WODEN-CRYSTAL LAKE	49	51.0	4.5	YES	YES	YES
WOODBINE	78	10.3	7.9	YES	NO	YES
WOODBURY CENTRAL	182	53.8	3.4	YES	YES	YES
WOODWARD-GRANGER	111	26.1	6.3	NO	NO	YES

NOTE: NUMBER OF PUPILS PER COMPUTER FOR ESTHERVILLE INCLUDES TUITIONED LINCOLN CENTRAL STUDENTS.

N = 379